

Chapter 9 Plate Tectonics

Section 9.2 Sea-Floor Spreading**(pages 254–260)**

This section discusses sea-floor spreading and subduction zones, and evidence for sea-floor spreading.

Reading Strategy (page 254)

Identifying Supporting Evidence Copy the graphic organizer. After you read, complete it to show the types of evidence that supported the hypothesis of sea-floor spreading. For more information on this Reading Strategy, see the **Reading and Study Skills** in the **Skills and Reference Handbook** at the end of your textbook.

Evidence	Hypothesis
a. _____	
b. _____	
c. age of the ocean floor	

Exploring the Ocean Floor (page 254–255)


Match each definition with its term.



Definition	Term
_____ 1. system that uses sound waves to calculate the distance to an object	a. sonar
_____ 2. deep faulted structure found along a divergent boundary	b. rift valley
_____ 3. a long chain of mountains extending through Earth's oceans	c. mid-ocean ridge

The Process of Sea-Floor Spreading (pages 256–257)

4. Circle the letter of the description of a subduction zone.
- a. where an oceanic plate is forced beneath a second plate
 - b. where an oceanic plate grinds past a second plate
 - c. where an oceanic plate moves away from a second plate

Chapter 9 Plate Tectonics**Evidence for Sea-Floor Spreading (pages 257–260)**

5. _____ has occurred when rocks formed millions of years ago show the location of the magnetic poles at the time of their formation.
6.  Circle the letters of each statement that provides evidence for sea-floor spreading.
- a. magnetic stripes in ocean-floor rock
 - b. earthquake patterns
 - c. measurements of the ages of ocean-floor rock
7. Circle the letter of the definition of reverse polarity.
- a. the loss of magnetism by iron-rich mineral grains when heated
 - b. the gain of magnetism by iron-rich mineral grains when cooled
 - c. magnetism opposite to that of Earth's present magnetic field
8. Is the following sentence true or false? Deep-focus earthquakes occur away from ocean trenches within the slab of lithosphere descending into the mantle. _____
9. Where do shallow-focus earthquakes occur relative to ocean trenches?

10.  Circle the letter of the location of the oldest oceanic crust, according to ocean drilling data.
- a. near the edges of continents
 - b. at the ridge crest
 - c. between the continental margins and ridge crest
11.  Circle the letter of the location of the youngest oceanic crust, according to ocean drilling data.
- a. at the continental margins
 - b. at mid-ocean ridges
 - c. between the continental margins and ridge crest